

--ABSTRACT OF THE DISCLOSURE

The invention concerns a method for producing a substance during which an aluminum base alloy is produced that has a content of 5.5 to 13.0% by mass of silicon and a content of magnesium according to formula $Mg [\% \text{ by mass}] = 1.73 \times Si [\% \text{ by mass}] + m$ with $m = 1.5$ to 6.0% by mass of magnesium, and has a copper content ranging from 1.0 to 4.0% by mass. The base alloy is then subjected to at least one hot working and, afterwards, to a heat treatment consisting of solution annealing, quenching and artificial aging. The magnesium is added based on the respectively desired silicon content according to the aforementioned formula. The material obtained by using the inventive method comprises having a low density and a high strength.--